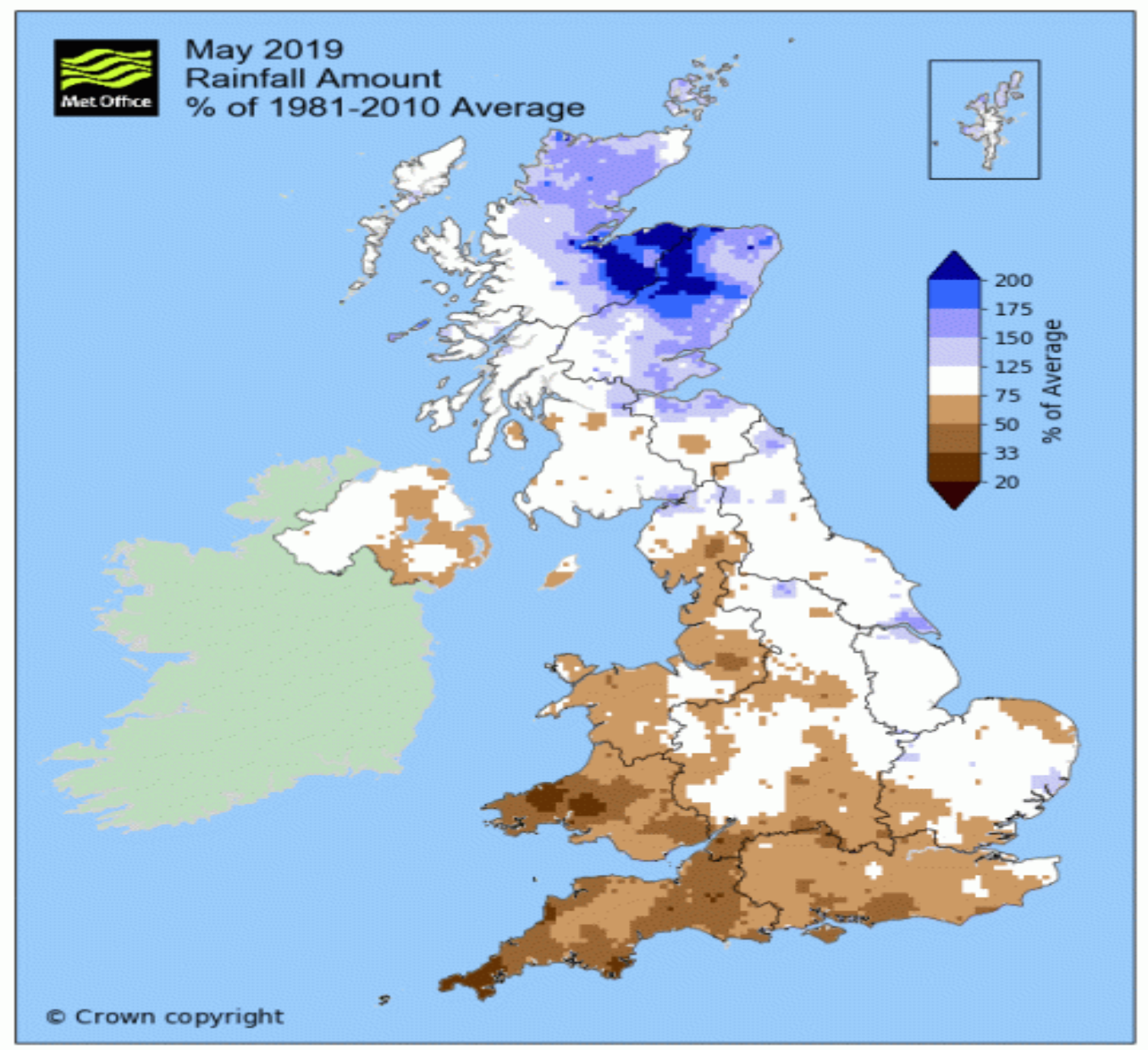
Unremarkable month brings Spring to a close

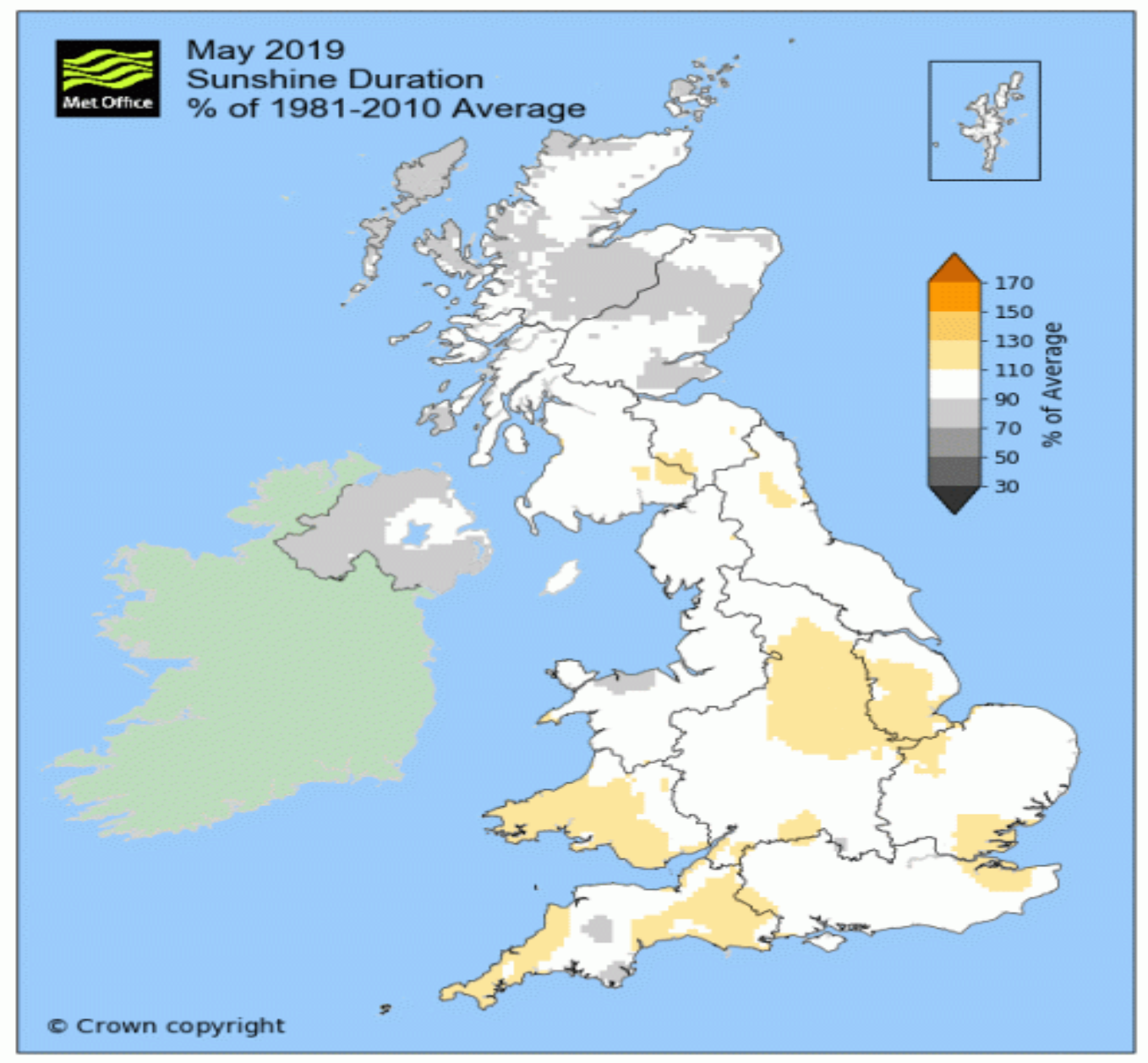
Description

A very average month of May has brought Spring 2019 to a close, with temperatures, sunshine and rainfall all close to the long-term averages for the UK.

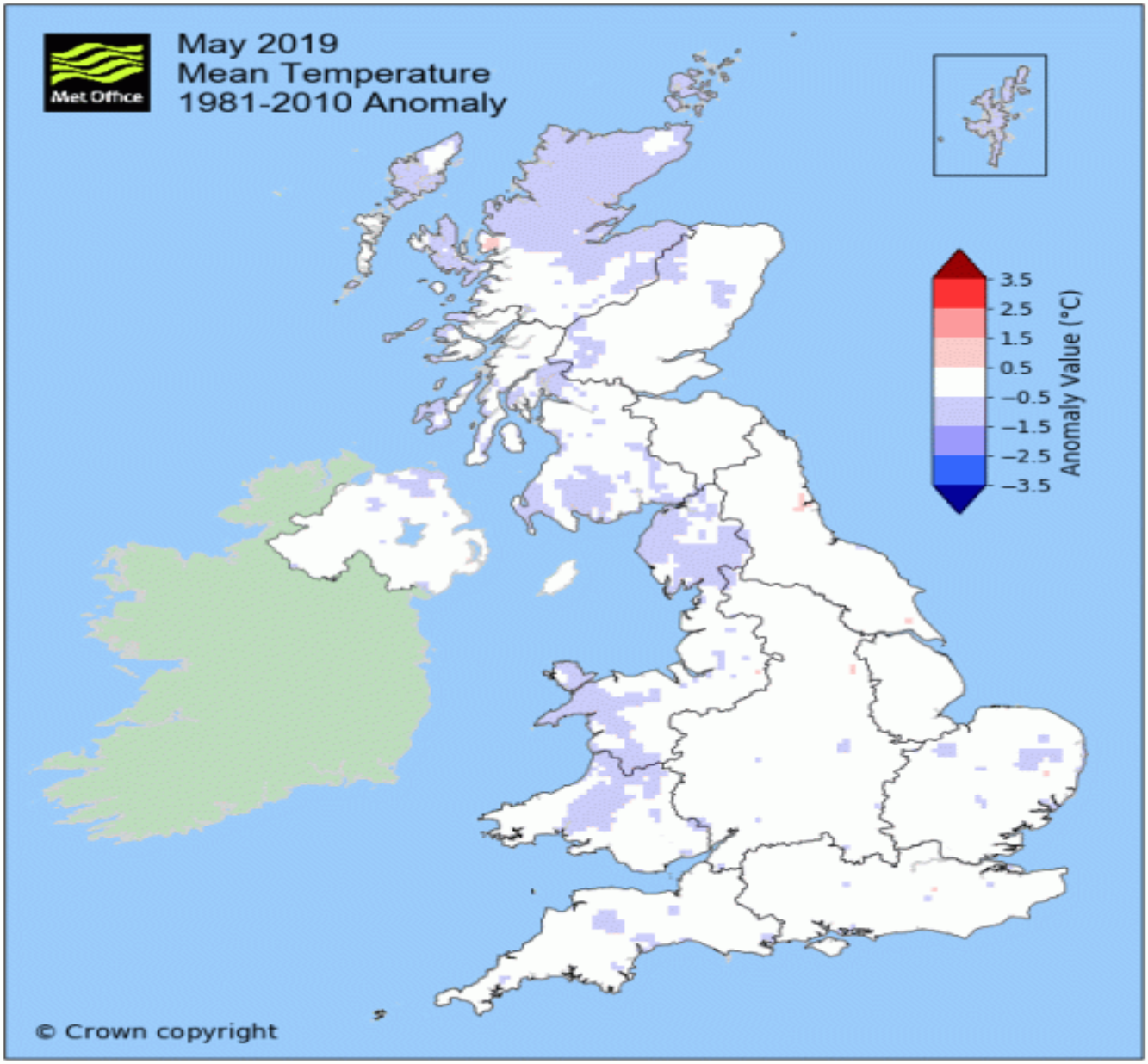
There have been regional differences though, with a clear split between north and south with varying amounts of rainfall when compared to the 1981-2010 long-term average. South-west England was comparatively dry, in sharp contrast to north-east Scotland. Moray received more than double its average monthly rainfall with 128.8 mm while further south-west Carmarthenshire only received 36% of its average with 33.6 mm of rainfall.



The hours of sunshine have also been close to average across the UK, with the most sunshine in South West England and South Wales where there was 212 hours of sunshine.



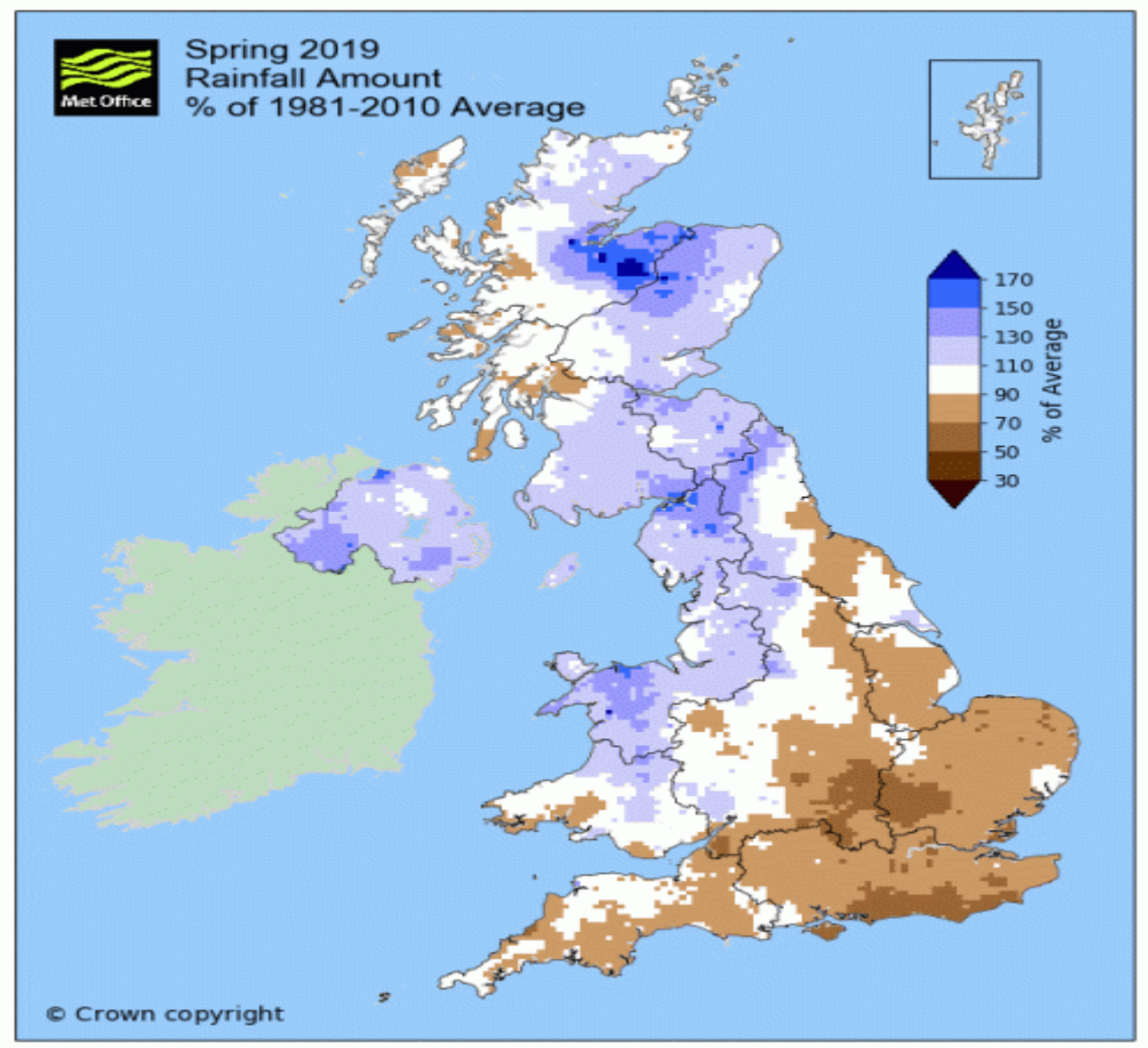
Mean temperatures across the UK were all close to the long-term average too, with all regions just under the average. The UK was 0.3 °C below average with a mean temperature of 10.0 °C.



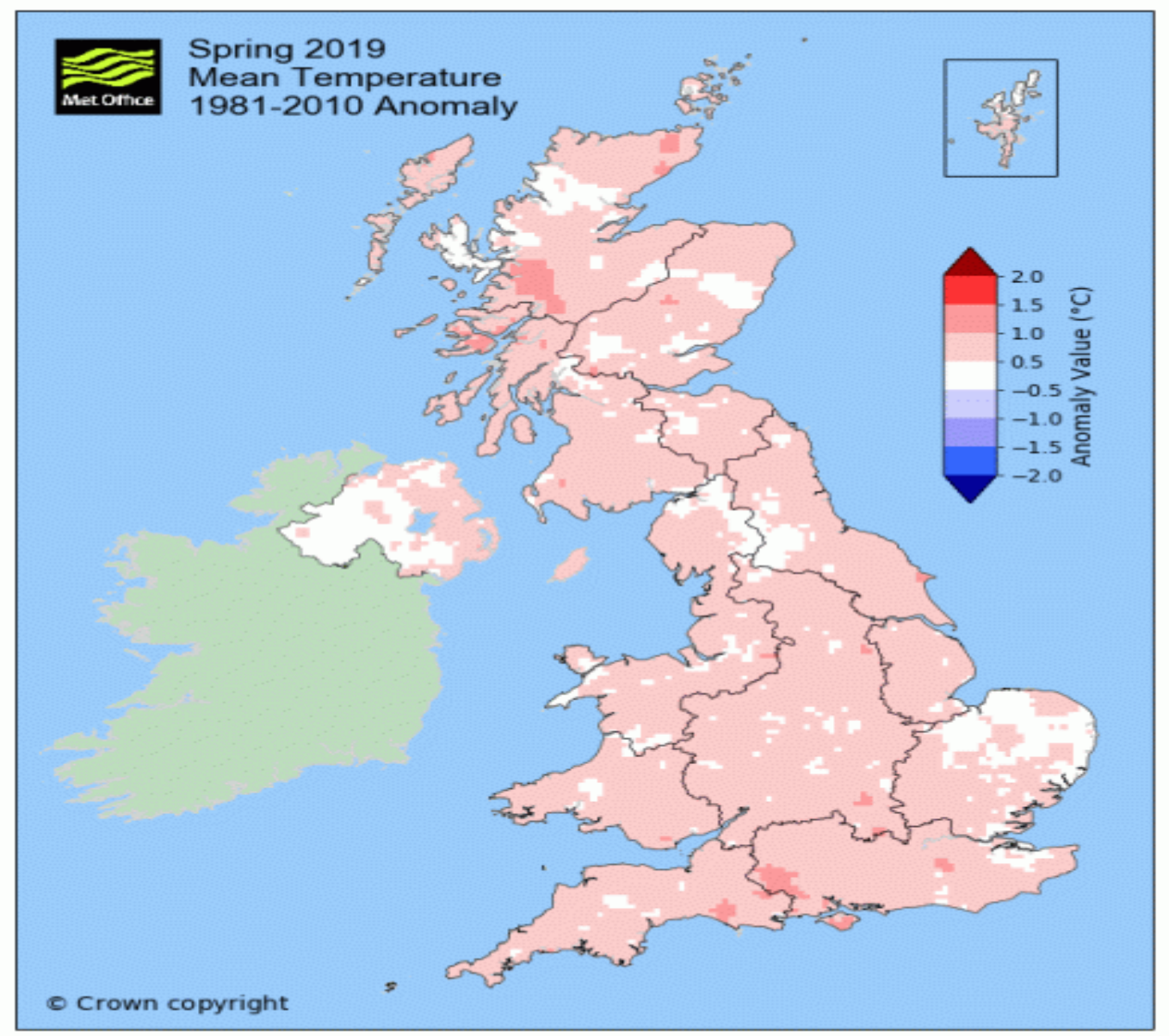
Provisional May 2019	Mean temp (°C)		Sunshine (hours)		Rainfall (mm)	
	Actual	Diff from avg (°C)	Actual	% of avg	Actual	% of avg
UK	10.0	-0.3	188.5	101	64.8	93
England	11.0	-0.2	201.6	106	43.9	75
Wales	10.2	-0.4	200.3	107	46.9	55
Scotland	8.3	-0.5	168.5	95	105.5	125
N Ireland	9.9	-0.3	158.5	87	58.5	81

Looking at Spring as a whole there is a broadly similar distribution of conditions. Many regions received

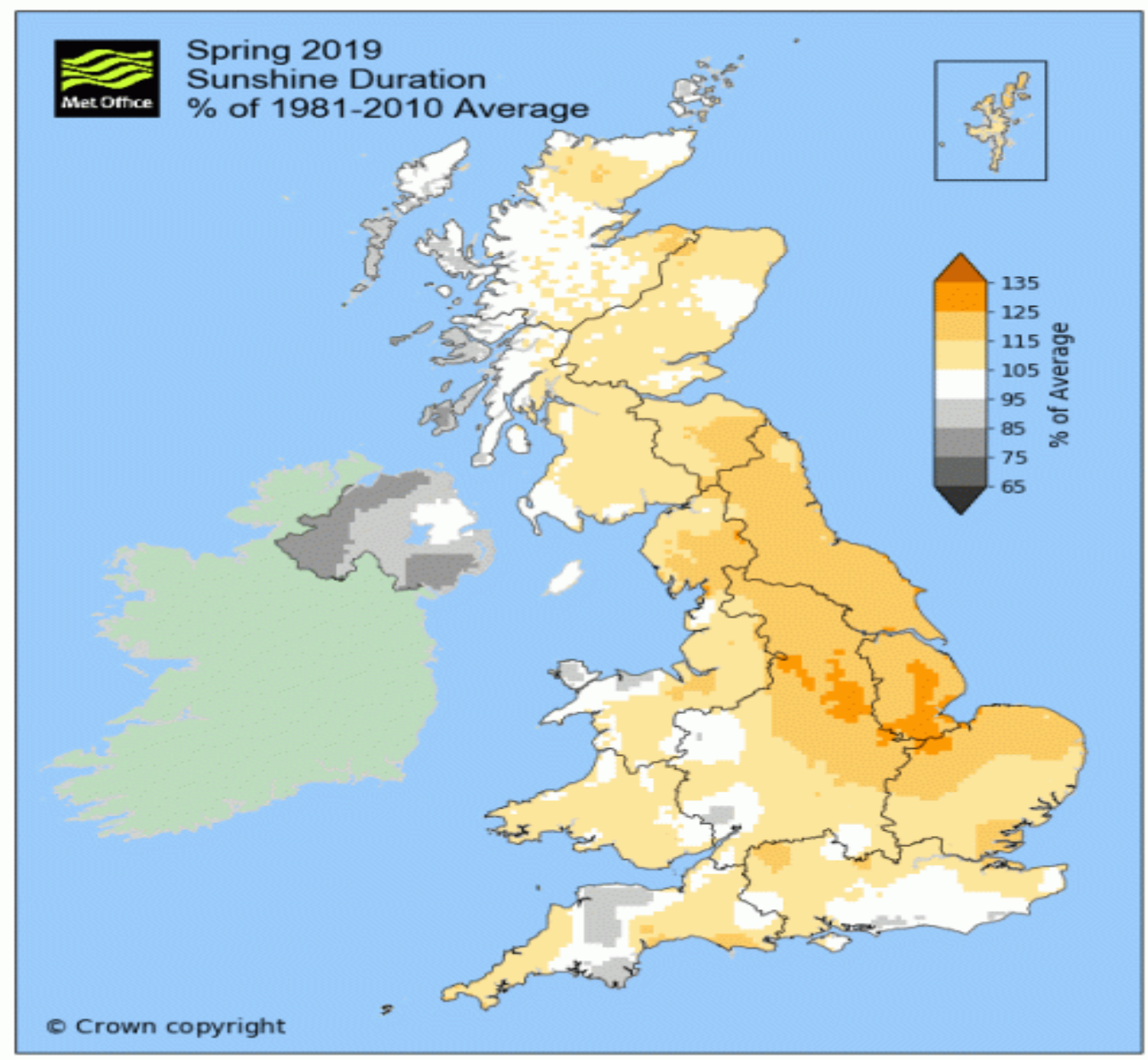
more than their average rainfall for the season, predominantly in the north and west. Once again, Moray was the wettest county when compared to the long-term average with 45% more than average, 272.2 mm in total. Other areas saw below-average rainfall, mostly in the south and east. Bedfordshire received 87.2 mm which is 62% of its average Spring rainfall total.



Despite spells of warmer weather, including over the Easter weekend, temperatures ended up being only just above average across much of the UK. For the country as a whole Spring was 0.7°C above the long-term average. The mildest location compared to its average was the Isle of Wight which was 1°C above average.



It was a sunny Spring, all regions exceeded their average sunshine hours with the exception of Northern Ireland. East Anglia was the sunniest area with 537 hours of sunshine across March, April and May.



Provisional Spring 2019	Mean temp (°C)		Sunshine (hours)		Rainfall (mm)	
	Actual	Diff from avg (°C)	Actual	% of avg	Actual	% of avg
UK	8.4	0.7	473.0	109	249.1	105
England	9.2	0.7	510.4	113	170.9	94
Wales	8.7	0.6	467.4	106	340.2	116
Scotland	7.0	0.7	429.9	106	346.2	109
N Ireland	8.4	0.5	372.3	87	295.7	122

You can keep up to date with the weather using our forecast pages and by following us on Twitter and Facebook

, as well as using our new mobile app which is available for iPhone from the App store and for Android from the Google Play store.

Please note that these provisional figures, especially for rainfall and sunshine, are subject to revision. Anomalies are expressed relative to the 1981-2010 averaging period.

Date Created
June 2019

Science Camp in full swing for 2019

Description

Met Office Science Camps have returned for their seventh year, with two camps having taken place earlier this year and two more to go.

Our Science Camps are a popular part of the Met Office STEM Outreach programme, giving 11-13 year old students the unique opportunity to camp overnight at one of the UK's premier science and engineering organisations.

The camps typically run through spring and summer terms, with students taking part in demonstrations and activities to learn about weather and climate science, as well as finding out more about how the Met Office forecasts the weather and climate predictions.

This year saw the introduction of some new content, which was received well both by campers and volunteers.

Leader of Met Office Science Camp Core Team, Debbie O'Sullivan, said:

> ***"Thanks to the dedication and enthusiasm of all of our volunteers we have had a great start to Science Camp 2019. The students had a fantastic time and left a lot more inspired than when they arrived."***

And here’s some of our students thoughts from Science Camps earlier this year:

> ***‘Thank you to all at the Met Office for putting on an Amazing, Brilliant, Educational, Exciting camp’***
>
> ***‘I adored it here, all the memories I have made are irreplaceable. I love the Met Office!’***
>
> ***‘I had an amazing time learning the process of how the weather is forecasted on a daily basis and how different part of the weather are formed. I now feel more inspired to go into something to do with the weather in the future.’***
>
> ***‘The Met Office camp was great, because it taught us about a wide range of techniques and skills that would be needed for numerous weather related jobs and issues. I learnt much here and I really enjoyed it!’***

The positive feedback is down to the hard work of over one hundred Met Office staff who volunteer their time for Science Camp, demonstrating their passion for what we do at the Met Office and ensuring the camps are inspiring and enjoyable.

With a fantastic start to Science Camp 2019, we look forward to continuing the camps throughout the rest of this year.

Check out our website for more information on Science Camp at the Met Office.

Date Created

June 2019

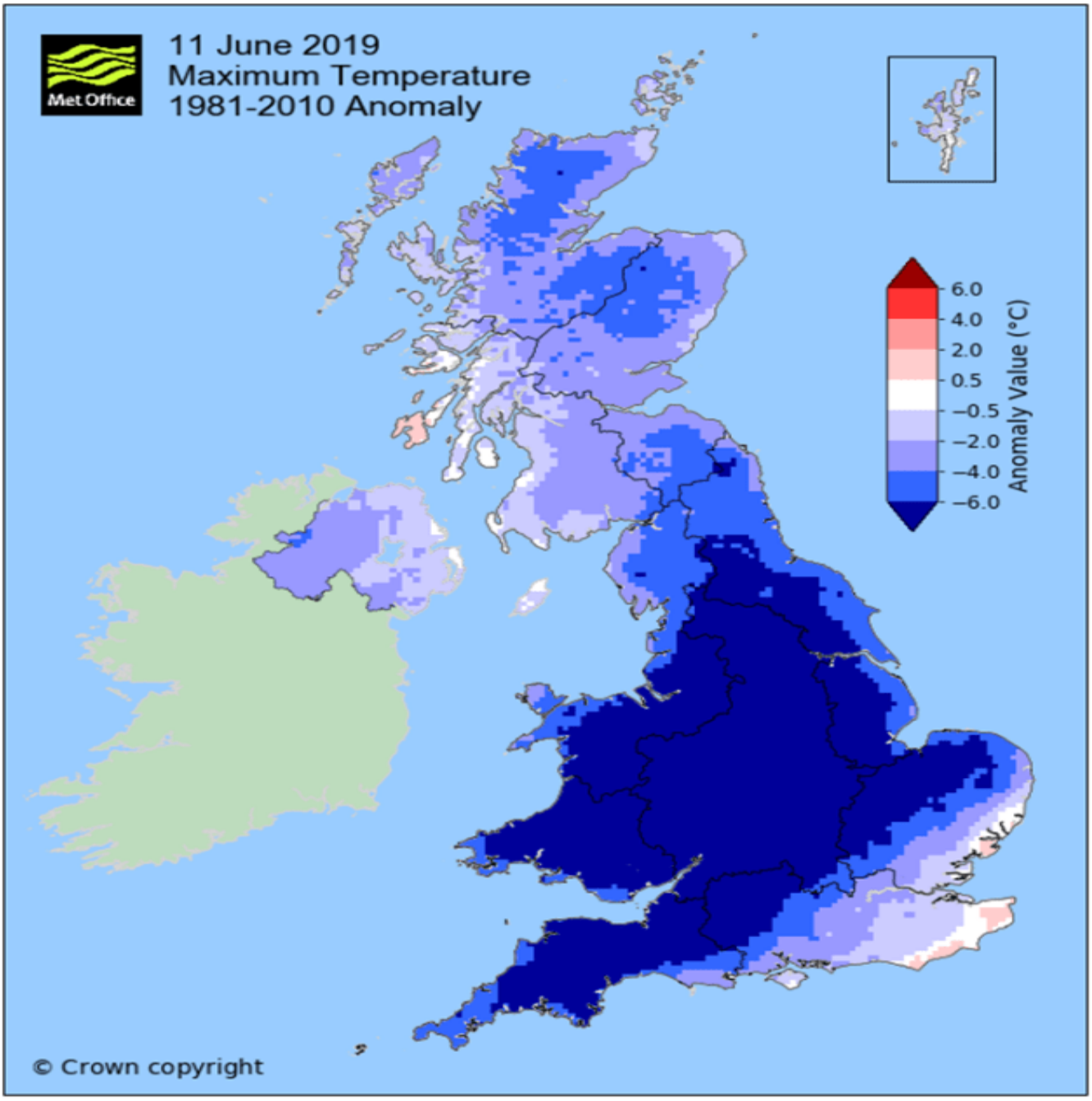
A cool and wet June so far after a warm start

Description

June 2019 got off to a false start – despite a warm first few days, the rest of the month so far has been much cooler and rather wet.

The UK has been stuck under an area of low pressure for most of the month so far, bringing a succession of slow-moving weather fronts and heavy rain.

For most days, the maximum temperature has been well below the UK June average of 17.3 Celsius, with the UK average maximum 15.5 C as of 13 June. Temperatures across the UK were widely below average on 11 June in particular, with much of central Wales struggling to reach 10 C.



At almost halfway through the month, England and Wales have already reached their average monthly rainfall totals for June, with 127% of the expected rainfall recorded in England and 120% in Wales. The wettest June on record for the UK is 2012, where the country received more than double (203%) of average rainfall for the month.

Monday 10th and Tuesday 11th were particularly wet days, especially in the east and southeast England and northeast Wales, where some places recorded almost two month's worth of rain in one day.

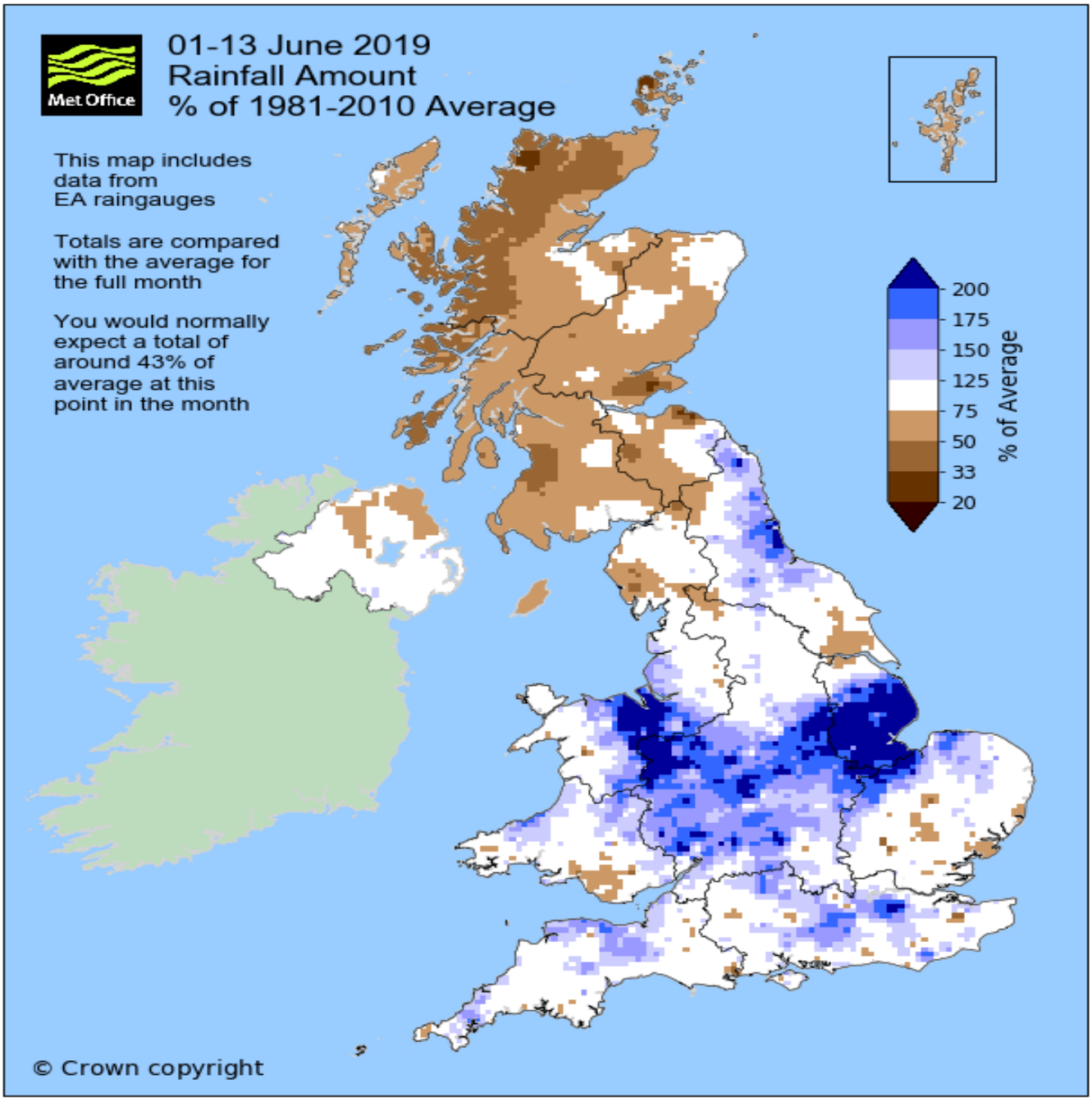
Flintshire in northeast Wales is the wettest region so far this month, receiving 140.5 mm (225%) of its

average June rainfall. This is followed closely by Lincolnshire, which recorded 111.2mm, or 198% of June average rainfall. .

The wettest place relative to average this month is Wainfleet (Skegness) recording nearly three times (287%) its normal June rainfall so far.

In Ham Hill, Kent, 94.6mm of rain fell within a 24-hour period – twice the June average of 47.6 mm for Kent.

The map below shows the rainfall so far this month as a percentage of the June average. The dark blue areas are those that have already received more than twice their normal June rainfall. In contrast Scotland has received just over half its normal June rainfall in the first half of the month so is much closer to what we might expect for this point in the month.



The Met Office issued a series of National Severe Weather Warnings for heavy rain and thunderstorms during this period, with amber rain warnings for London, southeast England and southeast Scotland. The Environment Agency issued numerous flood warnings and alerts, with significant flooding in Lincolnshire where over 100 properties were flooded and disruption to transport including railway lines.

Why the wet weather?

The unsettled weather and heavy rain is a result of an omega blocking pattern, with low pressure in the western Atlantic, high pressure in the mid-Atlantic and low pressure in the east Atlantic. The UK has

been stuck under this latter area of low pressure, allowing weather fronts to continually feed across the UK from the east. Heavy showers and thunderstorms also developed in this set up, adding to the already high rainfall totals.

Not everywhere has been very wet however, as western parts of Northern Ireland and Scotland have been shielded from the worst of the heavy rain.

Date Created
June 2019

Permanent Secretaries visit Met Office HQ

Description

As part of their visit to the South West for Civil Service Live events this week, Met Office Chief Executive Penny Endersby was delighted to host Cabinet Secretary and Head of the Civil Service Sir Mark Sedwill to our Exeter HQ along with a number of departmental Permanent Secretaries including Tamara Finkelstein (Defra), Matthew Rycroft (DFID) and Shona Dunn (Home Office).

During the visit they were shown how Met Office weather and climate science helps security and prosperity in the UK and around the world. This is especially achieved through working collaboratively not just with other departments and agencies, but also with the wider public sector, private sector and beyond.

The wide-ranging work of the Met Office which supports government departments includes supporting flood risk management now and in the future, animal and plant health, UKCP18 and air quality with Defra. Further examples include helping DFID meet the challenges of climate change through in-country programmes and supporting humanitarian responses to severe weather. This wide spectrum of work was summed up by Sir Mark Sedwill who said:

“Thank you for making me and my colleagues feel so welcome during our visit, it was fascinating to see the work of the Met Office and I was really impressed with how you work across the Civil Service

and the World, providing critical services to businesses and communities. Your work with other agencies and organisations across the public and private sector is an excellent example to us all in providing joined-up public services that have a positive impact on our citizens”

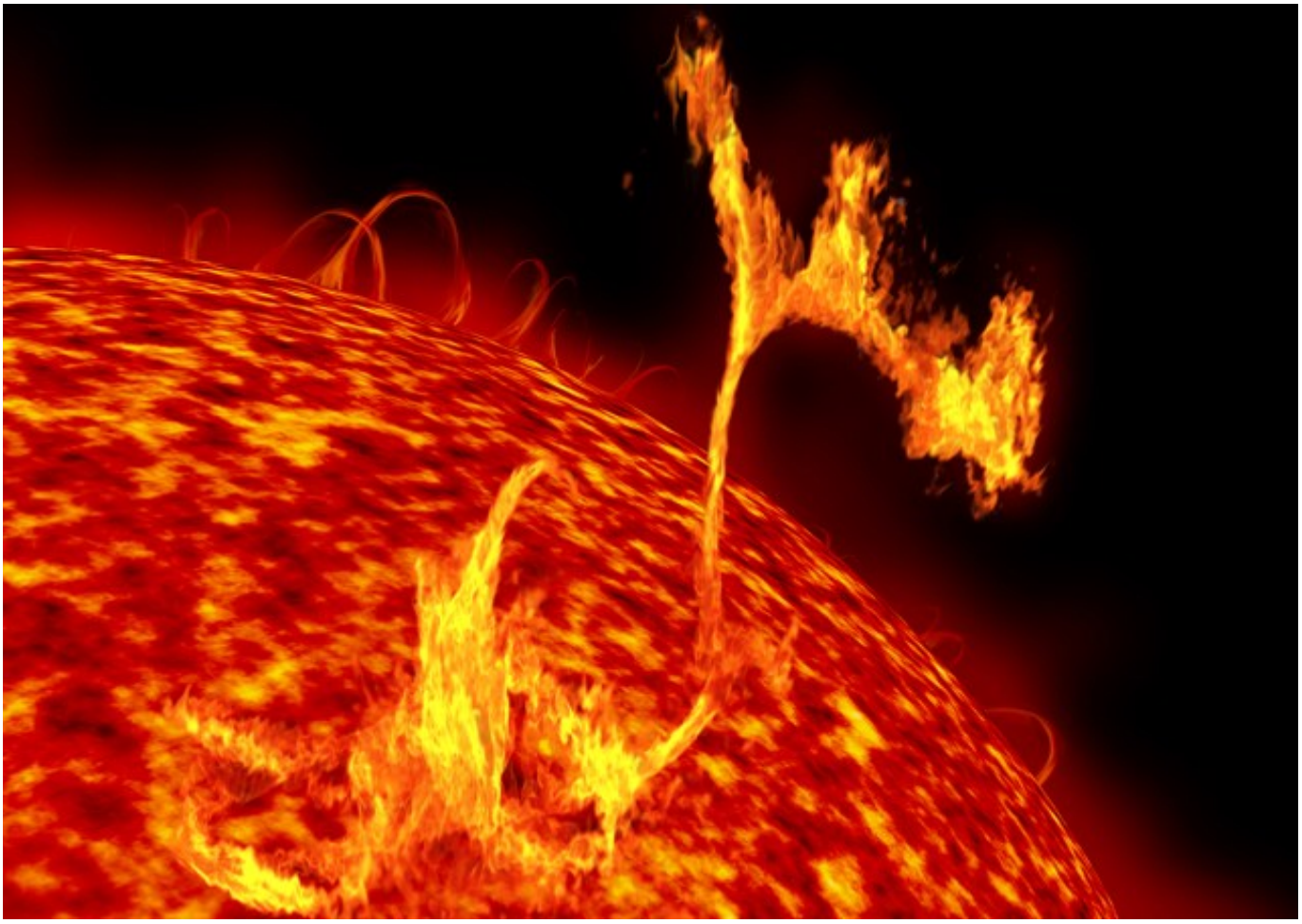
Date Created
June 2019

Preparing for when the sun wakes up

Description

Written by Mark Gibbs, Head of Met Office Space Weather Operations Centre and Dr Mario Bisi, Space Weather Scientist, STFC RAL Space

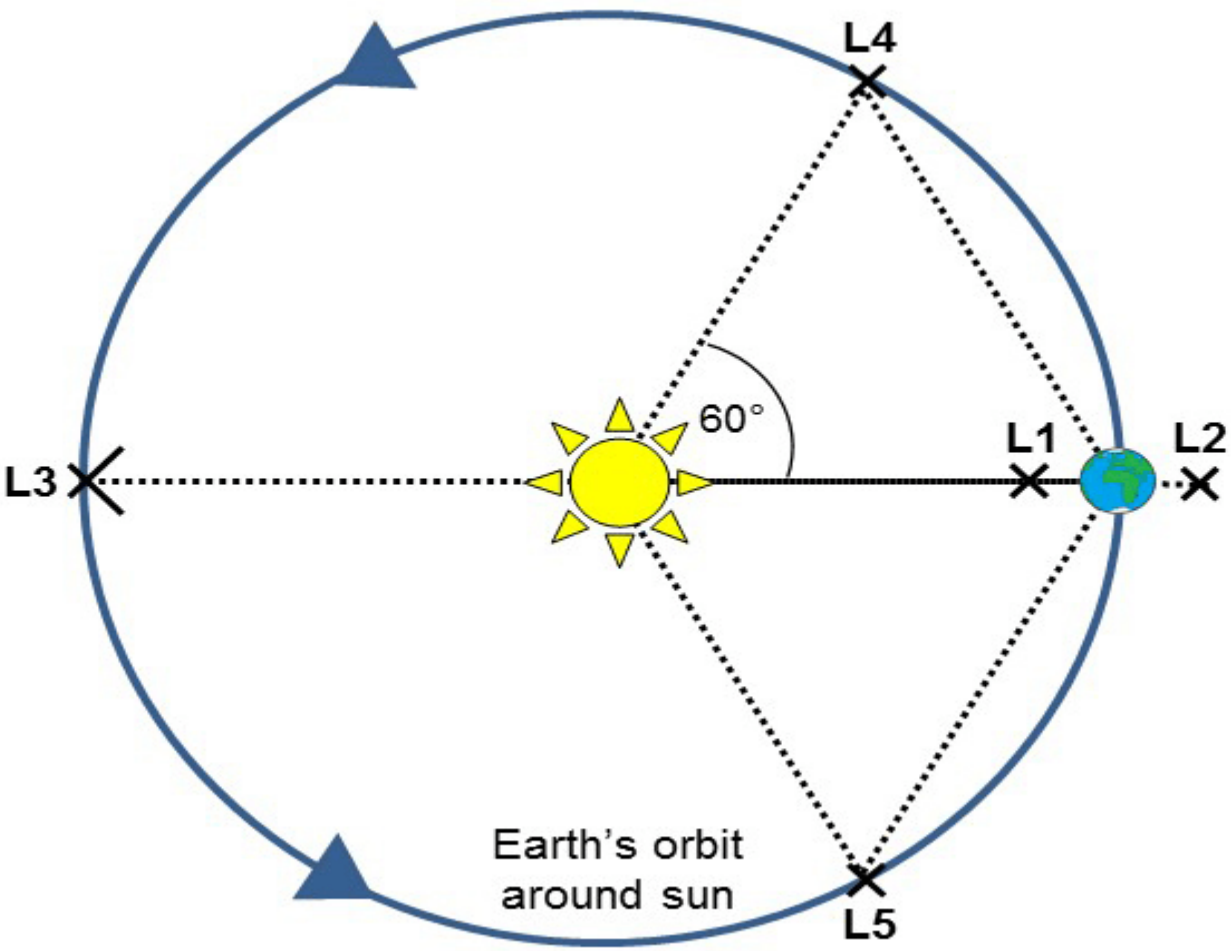
Experts from across the globe are in the UK this week discussing plans for a new European space mission aimed at improving our space weather forecasting capability.



Discussions will focus on plans to replace the spacecraft at Langrage 1 (L1) and Lagrange 5 (L5) locations. These proposed new spacecrafts are critical if we are not only to maintain our forecast skill but also enhance our ability to forecast damaging space-weather events with newer instruments and a more secure data supply.

The ‘Preparing for when the sun wakes up’ workshop brings together the key scientific/technical experts, science advisors, governments and service providers necessary to ensure international preparedness for future space-weather forecasting capability.

This workshop, the 3rd hosted by the UK, has special significance as it will be the last ‘rallying call’ ahead of the European Space Agency (ESA) Council of Ministers meeting in December where ESA will be asking member states to provide the funding to begin building the L5 spacecraft ready for launch in 2026.

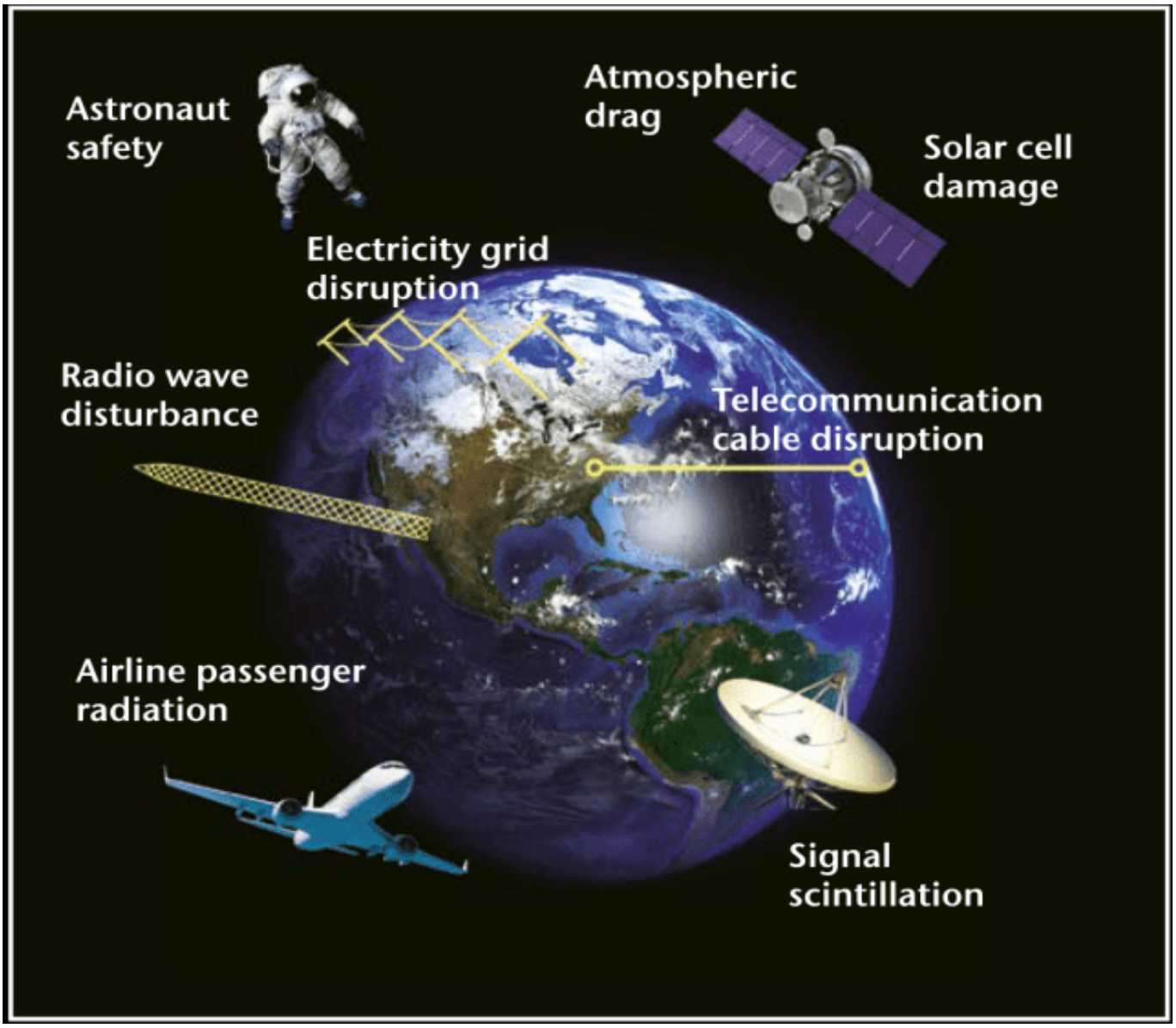


During the two-day event (27 & 28 June 2019) around 85 participants, predominantly from Europe and the USA, will examine the progress of the two ESA mission studies, the designs of the instruments that will fly into deep space and how these spacecraft support the global effort to mitigate the impacts of space weather.

Forecasters have already glimpsed the benefit that a L5 mission will give, from the NASA Solar TERestrial RElations Observatory (STEREO) mission. The two STEREO spacecraft have spent the last decade slowly making a partial orbit of the Sun providing new viewpoints of it and of the intervening space between the Sun and the Earth.

The USA is planning a mission, complimentary to the European L5 mission, that will replace both the NASA SOlar and Heliospheric Observatory (SOHO) and Deep Space Climate ObserVatoRy

(DSCOVR) spacecraft at L1. Together these two missions would future proof the current assets and provide enhanced space weather forecasting capability.



Severe Space Weather is recognised as a medium-high risk on the UK Government's National Risk Register. The impacts of an event similar to the Carrington event of 1859 (which is likely to occur on average once a century) could include localised power blackouts, loss of GPS signals (for navigation and accurate timing), and interruption to vital satellite services, which are critical for the day-to-day services that we rely on. These impacts occur as a result of billions of tonnes of magnetised plasma that is explosively released from the Sun, known as a coronal mass ejection (CME). CME's can head in any direction but forecasters analyse the infrequent images from SOHO and STEREO to determine the speed, size, and crucially, whether the CME is Earth directed.

The two missions to the L5 and L1 points will provide a reliable real-time flow of images andinformation to space-weather forecasters around the globe, both replacing and improving on theimages and data from SOHO and STEREO, both of which are operating many year’s beyond theirdesign life.

The UK has led the initiative to launch an operational mission to L5, from the early concepts through to the current design studies funded by ESA. The UK, through the UK Space Agency is the largest funder of this ESA initiative. Of the four design studies underway, three are led by UK organisations Airbus, the Science and Technology Facilities Council’s RAL Space and UCL-MSSL.

Date Created
June 2019